



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,945	02/21/2006	Atsuki Ishida	27691.NAT15297	8307
27683 7590 09/29/2008 HAYNES AND BOONE, LLP 901 Main Street Suite 3100 Dallas, TX 75202				
EXAMINER NILANONT, YOUAPORN				
ART UNIT		PAPER NUMBER		
4121				
MAIL DATE		DELIVERY MODE		
09/29/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,945

Applicant(s)

ISHIDA ET AL.

Examiner

YOUAPORN NILANONT

Art Unit

4121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15 is/are REJECTED.
7) ☒ Claim(s) 10 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 2/6/2006, 5/9/2008
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because of the followings:
 - a. "InterBox" as shown in figure 3A is not clearly described in the specification whether it is a "relay device 3" or a "network home appliance 2" cited in paragraph [0055].
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the "client device management device" is not support by the specification. For purposes of examination, it has been construed as "address storage section 16" since it is used by "InterServer 6" to associate relay device or tunneling session with the client device [0055].

Claim Objections

5. Claim 10 is objected to because of the following informalities: the method of claim 9 cited in claim 10 does not exist. For purposes of examination claim 10 has been construed as depending on claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 9 and 10 recite "and/or" thus, fail to particularly point out whether the claims affirmatively require the conjoined content representations or if they are to be interpreted in the alternative. For the purposes of examination, the representations in claims 9 and 10 have been construed in the alternative only.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-5, 7, and 15 of copending Application No. 11/596,994. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reason noted below:

Application under examination 10/536,945	Referenced copending application 11/596,994
<p>Claim 1: A method for connecting a client device and a server, the method implemented on an Internet connection system which comprises the client device, a relay device, and the server, the server being connected to the Internet and also to the client device through the relay device and the Internet, comprising the steps of: (a) notifying the relay device of an IP address of the server; (b) enabling the relay device to establish a TCP/IP session by means of a tunneling connection between the relay device and the server by use of the IP address; and (c) enabling the relay device to route communications via the TCP/IP session from the server to the client device.</p> <p>Since claim 2 of the copending application stated that the relay device is installed in a client device, therefore enabling communication from the server to the client device.</p>	<p>Claim 1: A method for connecting a client device and a server, said method implemented on an Internet connection system, said system comprising said client device, a relay device, and said server connected to the Internet network, said server also connected with said client device through said relay device and the Internet, comprising the steps of:</p> <p>(a) notifying said relay device of an IP address of said server;</p> <p>(b) establishing a TCP/IP session by a tunneling connection between said relay device and said server using the notified IP address; and</p> <p>(c) based on information from said relay device or said client device, grouping by said relay device or said server a plurality of relay devices or client devices for each of which a tunneling connection with said server is established, wherein said plurality of relay devices or client devices are considered to be connected to one virtual private network.</p> <p>Claim 2: The method of claim 1, wherein: each of said relay devices is installed in a respective client device.</p>
<p>Claim 6: A network-enabled home appliance, comprising: a control section for receiving a packet, the packet including a predetermined command, and controlling the network-enabled home appliance based on the command; a server address storage section for storing a global address of a server located on the Internet; a tunneling establishing section for establishing a tunneling connection between the network-enabled home appliance and the server based on the</p>	<p>Claim 15: A network-enabled home appliance, comprising:</p> <p>a control section for receiving a packet, said packet including a predetermined command, and controlling said network home appliance based on said command;</p> <p>a server address storage section for storing a global address of a server located on the Internet;</p> <p>a tunneling establishing section for establishing a tunneling connection between said network-enabled home</p>

global address of the server; and a packet processing device for encapsulating/decapsulating packets, the packets communicated with the server through the tunneling connection, and routing the packets to the control section or the server.	appliance and said server based on the global address of the server address; a group information storage section for receiving from said server information of other network home appliances belonging to a same virtual private network group, and storing the information; and a packet processing device for encapsulating/decapsulating packets, said packets communicated with said server through said tunneling connection, and routing said packets to said control section or said other network home appliances.
--	--

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 6, 8-9, 11-12, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al. (U.S. Patent No. 6,523,696).

13. Regarding claim 6, Saito teaches a network-enabled home appliance (see figure 7 "AV Connection Device" and column 20 lines 37-41, "227 also has a function to set this AV connection device as a proxy server of services...") , comprising:

a control section for receiving a packet, the packet including a predetermined command, and controlling the network-enabled home appliance based on the command (see figure 8, "1394 AV Command Processing Function 228");

a server address storage section for storing a global address of a server located on the Internet (see figure 8, "1394/IP Service Location Processing Function 226");

a tunneling establishing section for establishing a tunneling connection between the network-enabled home appliance and the server based on the global address of the server (see figure 8, "IP Processing Function 224");

and a packet processing device for encapsulating/decapsulating packets, the packets communicated with the server through the tunneling connection (see figure 8, "1394/IP Command Conversion Function 229"), and routing the packets to the control section or the server (see figure 8, "1394 I/F 221" and "Public Network I/F 223").

14. Regarding claim 8, Saito teaches a server used on an Internet connection system which comprises a client device, a relay device, and the server, the server being connected to Internet and also to the client device through the relay device and the Internet (see figure 7 "PC 206", "Digital TV 207", "1st AV Connection Device 204", "2nd AV Connection Device 205", "Public Network 202" and figure 43, column 42 lines 16-21), comprising:

a tunneling establishing section for establishing a tunneling connection to the relay device (see figure 44, "IP Processing Unit 2202", column 42 lines 45-48 and 56-61);

a client device management device for managing the client device in association with the relay device or the tunneling connection (see figure 44, "NAT Processing Unit 2206");

and a routing device for routing a connection, the connection from the Internet to the client device, through the tunneling connection to the relay device which is connected to the client device, based on management at the client device management device (figure 47, "Internet I/F 2205" and "1394 I/F").

15. Regarding claim 9, Saito teaches the server of claim 8, further comprising:

a model identification section for determining if the client device is of a predetermined model and/or if the relay device is of a predetermined model (see figure 8, "1394/IP Service Location Processing Function 226" and column 20 lines 25-28 "recognizes what terminal/service exists");

and a command conversion section for converting a command to be sent to the client device to a command in a predetermined format for controlling the client device, based on results from the model identification section (see figure 8, "1394/IP Command Conversion Function 229").

16. Regarding claim 11, Saito teaches the server of claim 9, further comprising: a communication session disconnection section for disconnecting communication sessions or limiting packet transmissions if the model identification section determines that the client device or the relay device is not of the predetermined model (see figure 44, "Packet Filter 2208" and column 43 lines 13-19).

17. Regarding claim 12, Saito teaches the server of claim 8, wherein the client device includes peripheral equipment, which is communicable with the relay device but cannot independently connect to the Internet (see figure 7, "Air conditioner 213").

18. Regarding claim 15, Saito teaches the server of claim 8, further comprising:
a state information obtaining section for obtaining at least one of an operation state, a usage state and location information of the client device and/or the relay device (see Saito, figure 18, 19, and column 27 lines 20-36 "to obtain location information and the attribute information").

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1-4, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (U.S. Patent No. 6,523,696) in view of Tsuchiya et al. (U.S. Patent No. 6,118,784).

21. Regarding claim 1, the Saito reference teaches a method for connecting a client device (see figure 7, "DVD Player 208," "PC 210," or "Air Conditioner 213") and a server (see figure 7, "1st AV Connection Device" or "2nd AV Connection Device 203"), the method implemented on an Internet connection system which comprises the client device (see figure 7, "Microwave Oven 214" or "Air Conditioner 213"), a relay device (see figure 7, "PC 210"), and the server (see figure 7, "1st AV Connection Device" or "2nd

AV Connection Device 203"), the server being connected to the Internet and also to the client device through the relay device and the Internet (see figure 7, "Public Network 202"). However, Saito does not explicitly teach the steps of establishing connection between two home networks through the Internet.

Conversely, Tsuchiya discloses method comprising the steps of:

(a) notifying the relay device of an IP address of the server (see Tsuchiya, figure 6 "Response (Message L)" and column 11 lines 35-40);

(b) enabling the relay device to establish a TCP/IP session by means of a tunneling connection between the relay device and the server by use of the IP address (see Tsuchiya, figure 6, it is understood that with a response from the DHCPv4 Server 4, the "IPv4-IPv6 Converting Apparatus 1" is now able to tunnel packets from terminal 5 in IPv4 and forward it to terminal 2 same way as tunneling was defined in [0080]);

and (c) enabling the relay device to route communications via the TCP/IP session from the server to the client device (see Tsuchiya, figure 6 "Message P").

It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have incorporated the teaching of Tsuchiya's tunneling technique in order to connect two remote networks which may have been upgraded to Internet Protocol version 6 (Saito, column 19 lines 23-26) through public network which may be of previously existing Internet Protocol version 4.

22. Regarding claim 2, Saito and Tsuchiya teach the method of claim 1. Saito further teaches additional limitation wherein the relay device is each installed in each client device (see Saito, figure 43, "IP Terminal 2102").

23. Regarding claim 3, Saito and Tsuchiya teach the method of claim 1. Tsuchiya further teaches additional limitation wherein in the step (a), the relay device connects to a tunneling broker server provided on the Internet, and receives the IP address of the server from the tunneling broker server (see Tsuchiya, figure 3 "DNSv6 Server 6"). It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have used a DNS server as taught by Tsuchiya in order to efficiently update any destination IP address for any device in the network as it was commonly known in the art at the time of the invention.

24. Regarding claim 4, Saito and Tsuchiya teach the method of claim 1, wherein Tsuchiya further teaches that step (b) comprises the steps of:

(b-1) enabling the relay device to connect to the server by use of the IP address of the server (see Tsuchiya, figure 8 "Response (Message L)");

(b-2) enabling the server to notify the relay device of an IP address of the relay device for establishing the TCP/IP session by means of the tunneling connection (see Tsuchiya, figure 9 "Give IPv4 Address" and column 12 lines 31-33);

and (b-3) establishing the TCP/IP session by means of the tunneling connection between the server and the relay device (see Tsuchiya, figure 8 and 9).

Please refer to rejection for claim 1 above for rationale for combining Saito and Tsuchiya references.

25. Regarding claim 10, Saito and Tsuchiya teach ~~the method of claim 9~~ --the method of claim 1--. Saito further teaches additional limitations comprising:

Comment [yn1]: claim 10 originally cited as depending on claim 9, but claim 9 is a server. I'm construing claim 10 as depending on a method of claim 1. Should I just delete the "method of claim 9"?

a model identification section for determining if the client device is of a predetermined model and/or if the relay device is of a predetermined model (see figure 8, "1394/IP Service Location Processing Function 226" and column 20 lines 25-28 "recognizes what terminal/service exists");

and a command conversion section for converting a command to be sent to the client device to a command in a predetermined format for controlling the client device, based on results from the model identification section (see figure 8, "1394/IP Command Conversion Function 229").

26. With respect to claim 7, Saito teaches the network-enabled home appliance of claim 6. However, where Saito does not explicitly disclose, Tsuchiya further teaches additional limitations comprising:

a broker server address storage section for storing an address of a tunneling broker server located on the Internet (see Tsuchiya, figure 1 "DNS Substituting Means 13" and column 5 lines 60-65);

and a server address obtaining section for accessing the tunneling broker server based on the address of the tunneling broker server, and receiving the global address of the server from the tunneling broker server (see Tsuchiya, figure 1 "IPv4 Address Capturing Means 14").

It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have used a DNS server to obtain the actual IP address of a destination device as taught by Tsuchiya in order to efficiently update any

destination IP address for any device in the network as it was commonly known in the art at the time of the invention.

27. Claims 13-14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Saito et al. (U.S. Patent No. 6,523,696) in view of Sekiguchi (U.S. Patent No. 6,957,257).

28. Regarding claim 13, Saito teaches the server of claim 8 however it does not disclose a network type identification section for determining if a first network environment connected to the client device and/or the relay device is of a predetermined type. Sekiguchi, on the contrary, does disclose such limitation (see Sekiguchi, figure 2, "IP Address Processing Section 23" and column 3 lines 54-55). It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to have incorporated Sekiguchi's function of determining the network type of incoming packets in order to be able to adapt to the IPv6 network that may be used as one of Saito's home network and still accurately forward information between different types of network.

29. Regarding claim 14, Saito and Sekiguchi teach the server of claim 13. Furthermore, Sekiguchi teaches additional limitation comprising:

a communication session disconnection section for disconnecting communication sessions or limiting packet transmissions if a private network environment connected to the client device or the relay device is determined not of the predetermined type (see Sekiguchi, figure 2 "IP Address Processing Section 23" and figure 5 "St54" and "St55"). It would have been obvious to the person having ordinary skill in the art, at the time the

invention was made, to have included Sekiguchi's function in Saito's IP processing function unit in order to prevent error caused by communication between unidentifiable types of networks.

30. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (U.S. Patent No. 6,523,696) in view of Tsuchiya et al. (U.S. Patent No. 6,118,784) as applied to claim 1 above, and further in view of Kobayashi et al. ("Network Access Control for DHCP Environment").

31. Regarding claim 5, Saito and Tsuchiya teach the method of claim 4. Saito further discloses method wherein the step (b-1) comprises the step of enabling the server to perform connection authentication for the relay device (see Saito, column 45 lines 58-65). However, both references do not disclose method of assigning an IP address only to an authorized client.

On the contrary, the Kobayashi reference suggests the use of method wherein the step (b-2) comprises the step of generating the IP address of the relay device depending on a result of the connection authentication (see Kobayashi, page 6 Conclusion, "An authenticated DHCP server allocated network resources only to the authenticated clients," wherein the "network resources" may be IP addresses (Kobayashi, page 4)). It would have been obvious to the person having ordinary skill in the art, at the time the invention was made, to include Kobayashi's method of authenticating clients before giving out IP address to them in order to avoid denial of service attack where rogue clients are requesting numerous IP address until Tsuchiya's DHCP server runs out of IP address in its pool.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Wang and Moyer et al. references teach system and method for remotely control home appliances, both Internet capable and non-Internet capable, from remote location through Internet.

b. Durand et al. reference teaches a method of sending IPv6 packets through IPv4 tunnels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG AND RUBICAM LLP whose telephone number is (571)270-5655. The examiner can normally be reached on Monday through Thursday and alternate Friday at 7:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Robertson can be reached on 571-272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. N./
Youpaporn Nilanont
9/29/2008
Examiner, Art Unit 4121

/Yemane Mesfin/
Examiner, Art Unit 2144

